

**SEC. 271 SOLUTION: TO SATISFY FIRST CHECKLIST ITEM, BOC MUST PROVIDE (OR AGREE TO PROVIDE) INTERCONNECTION OF *NETWORK FACILITIES*, REGARDLESS OF THE TECHNOLOGY EMPLOYED OR SERVICES OFFERED OVER THOSE FACILITIES**

- **CONCERN: BOCS MAKE ENTANGLEMENT COSTS SO SUBSTANTIAL THAT PHYSICAL COLLOCATION IS IMPRACTICAL**

***COLLOCATION IS PERMANENT DEPENDENCY FOR TERMINATION OF CLEC'S TRAFFIC AND CATALYTIC (BUT HOPEFULLY TEMPORARY) DEPENDENCY FOR THE UNE LOOPS NEEDED FOR EARLY "MASS MARKET" COMPETITION***

- TCG's four-year effort in Texas to collocate with SWBT has failed to result in a single completed physical collocation
- BOCs circumvent their physical collocation obligation by arbitrarily declaring that there is no physical space available in selected wire centers
- BOCs restrict CLEC collocation equipment

**SEC. 271 SOLUTION: BOC MUST SPECIFY WHETHER PHYSICAL COLLOCATION OR VIRTUAL COLLOCATION IS AVAILABLE IN EACH CENTRAL OFFICE AND INCLUDE STATE-APPROVED EXEMPTION FOR EVERY OFFICE WHERE PHYSICAL COLLOCATION IS NOT AVAILABLE. ("AVAILABILITY" OF COLLOCATION IMPLIES THAT COLLOCATOR MAY PLACE ANY EQUIPMENT OF ITS CHOOSING; BOC HAS TO JUSTIFY ANY LIMITATION)**

## **UNBUNDLED LOCAL LOOPS (Sec. 271(c)(2)(B)(ii) and (iv))**

- **CONCERN: BY IMPOSING SUBSTANTIAL COSTS OF ENTANGLEMENT ON CLEC'S USE OF UNBUNDLED LOOPS, BOC EFFECTIVELY AVOIDS OBLIGATION TO MAKE LOOPS AVAILABLE**

- The "cash cost" of the loop is often much less important than the "entanglement cost" of using the loop

**SEC. 271 SOLUTION: CLEC AND ILEC OPERATIONS SUPPORT SYSTEMS (OSS) MUST BE SEAMLESSLY INTERCONNECTED AND BOC MUST DEMONSTRATE HISTORY OF "PERFORMANCE PARITY" FOR LOOP UNE**

- **CONCERN: LOOP UNE ENTANGLEMENTS CRIPPLE CLEC'S ABILITY TO UTILIZE NEW TECHNOLOGIES THAT COULD REDUCE ENTANGLEMENT COST AND ALLOW CLEC TO INTRODUCE BETTER SERVICE TO CONSUMERS**

***Example: DENYING ACCESS TO LOCAL LOOP UNES CAPABLE OF SUPPORTING xDSL.***

- While denying HDSL-capable local loops to CLECs, BOCs regularly provision DS1 service to customers over HDSL-equipped local loops, violating non-discrimination requirement

***Example: UNDERLYING LOOP UNES USED BY CLEC WITH xDSL HAS WORSE PERFORMANCE (FAILURE RATES, MTTR) THAN THE BOC SERVICE THAT UTILIZES SUPPOSEDLY SIMILAR LOOP***

**SEC. 271 SOLUTION: BOC MUST DEMONSTRATE THAT IT SUPPLIES AND MAINTAINS LOCAL LOOPS CAPABLE OF SUPPORTING THE SAME TECHNOLOGIES IT USES (WITH “PERFORMANCE PARITY”), CONSISTENT WITH THE FUNCTION OR SERVICE THAT THE CLEC PROVIDES OVER THE LOOP**

- “Section 251(c)(3) does not impose any service related restrictions or requirements on requesting carriers in connection with the use of unbundled elements.”  
(Interconnection Order ¶ 264)

- **CONCERN: BOCS NARROWLY CONSTRUE A UNE “LOOP” TO BE A COPPER TWISTED PAIR SO THAT LINKS TO CUSTOMER PREMISES DERIVED FROM “BROADBAND” FACILITY IS A “SERVICE”, NOT A “LOOP,” SHIELDING DERIVED LINKS FROM UNBUNDLING REQUIREMENT**

***UTILIZING DERIVED “LOOPS” CAN SUBSTANTIALLY REDUCE THE CLEC’S “ENTANGLEMENT COSTS”***

***IF BOC IS CORRECT, “LOOP UNE’S” WOULD NEVER BE AVAILABLE AT CUSTOMER LOCATIONS SERVED BY BOC ONLY OVER BROADBAND FIBER OR WIRELESS***

**SEC. 271 SOLUTION: BOC MUST OFFER UNBUNDLED “LOOPS” (I.E., DS1) DERIVED FROM HIGH CAPACITY FACILITIES**

## **OPERATIONS SUPPORT SYSTEMS (Sec. 271(c)(2)(B)(ii))**

- **CONCERN: OSS INTERCONNECTION NEEDED BY FACILITIES-BASED CLEC TO REDUCE ENTANGLEMENT IS NOT AVAILABLE**
    - **Access to ILEC's OSS for ordering "Total Service Resale" is largely irrelevant to more complex OSS interconnection for facilities-based CLECs**
    - **Preordering, Ordering, Installation, Maintenance and Repair, and Billing of loop UNEs is particularly problematic**
    - **Parity performance reports are scarce or unusable**
- SEC. 271 SOLUTION: "OSS FOR TSR" IS INSUFFICIENT FOR CHECKLIST COMPLIANCE; BOC MUST DEMONSTRATE SEAMLESS INTERCONNECTION OF CLECS' OSS WITH BOC OSS FOR ALL FIVE OSS FUNCTIONS**
- **"Seamless interconnection" means that CLEC is operationally indifferent to whether the CLEC is using its own facilities or UNEs**

## *Electronic Bonding: Applications & Standards*

EB Application	Required Functions	Standards
Pre-ordering	<ul style="list-style-type: none"><li>• Service and Feature Availability Checking</li><li>• Customer Demographics</li><li>• Terms of Service (Pricing, QOS Guarantees)</li><li>• Customer Service Record (CSR) Request</li><li>• Customer Credit Checking</li><li>• Address Validation</li><li>• Due Date Inquiry and Reservation</li><li>• Appointment Scheduling</li></ul>	None available. Some portions of this functionality may be included in the TCIF Service Ordering Standards, Release 8.
Ordering	<ul style="list-style-type: none"><li>• Service Order Processing (UNE, LNP)</li><li>• Order Change Processing</li><li>• Firm Order Commitment (FOC)</li><li>• Detailed Layout Record (DLR)</li><li>• Order Jeopardy Notification</li><li>• Order Management (Progress Tracking)</li></ul>	Telecommunications Industry Forum (TCIF) Service Ordering EDI Standards, Release 8.
Provisioning	<ul style="list-style-type: none"><li>• Coordinated Dispatch</li><li>• Coordinated Testing</li><li>• Coordinated Turn-up</li></ul>	None available.
Maintenance & Repair	<ul style="list-style-type: none"><li>• Trouble Ticket Exchange</li><li>• Trouble Ticket Status Queries</li><li>• Coordinated Work Force Dispatch</li><li>• Real-time Alarm Reporting</li><li>• Real-time Test Access Support</li><li>• Performance Monitoring/Reporting</li><li>• Coordinated Traffic Management</li></ul>	T1M1 Standards T1.227/228 for Trouble Administration
Billing	<ul style="list-style-type: none"><li>• Usage Data Exchange</li><li>• Bill Exchange</li><li>• Discrepancy Reconciliation</li></ul>	Telecommunications Industry Forum (TCIF) Issue 7.

## **RECIPROCAL COMPENSATION (Sec. 271(c)(2)(B)(xiii))**

- **CONCERN: BOC UNWILLINGNESS TO PAY RECIPROCAL COMPENSATION IS A MAJOR ENTANGLEMENT COST AND DIMINISHES CLEC ABILITY TO COMPETE FOR INBOUND TRAFFIC**
  - BOC refusals to pay CLECs for terminating ISP traffic discourages CLECs from serving ISPs (despite 13 State PUC decisions requiring payment) and solidifies BOC control of ISP market
  - BOC “games” with payments for non-ISP traffic are equally entangling and expensive

**SEC. 271 SOLUTION: BOC FAILURE TO PAY RECIPROCAL COMPENSATION EQUALS TO FAILURE TO SATISFY CHECKLIST ITEM 13. (ANY OUTSTANDING UNPAID BALANCE DUE TO A CLEC IS PER SE FAILURE.)**

- **CONCERN: CLEC ARE UNABLE TO TERMINATE ALL TRAFFIC ORIGINATED ON THEIR NETWORKS UNDER RECIPROCAL COMPENSATION, DESPITE REQUIREMENT OF SEC. 252(d)(2); RECIPROCAL COMPENSATION IS CURRENTLY LIMITED TO “LOCAL” TRAFFIC ORIGINATED WITHIN SPECIFIED GEOGRAPHIC AREAS**

***LIMITING RECIPROCAL COMPENSATION GEOGRAPHICALLY CONSTRAINS CLEC ABILITY AND INCENTIVE TO OFFER COMPETITIVE SERVICES AND RATE PLANS***

**SEC 271 SOLUTION: BOC CAN ONLY SATISFY CHECKLIST ITEM 13 WITH INTERCONNECTION AGREEMENTS THAT ALLOW TRAFFIC ORIGINATED ON THE COMPETITOR’S NETWORK TO BE TERMINATED AT RECIPROCAL COMPENSATION RATES, AS REQUIRED BY SEC. 252(d)(2)**

# **Minimizing Entanglement, Maximizing Competition**

*Accelerating Local Exchange Competition by  
Neutralizing Monopolists' Ability to Control  
Competitors' Costs and Capabilities*

*February 1998*

*Adapted from Comments of Robert Annunziata, Chairman, President, and CEO of Teleport  
Communications Group, on The Second Anniversary of the  
Enactment of the Telecommunications Act of 1996*



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## **Introduction**

Two years ago, the Telecommunications Act of 1996 established a national policy to encourage the development of competition for local telecommunications services. Today, many observers are trying to assess whether the Act has been a “success” or a “failure.” From the perspective of TCG, the largest, most experienced, and most successful Competitive Local Exchange Carrier (CLEC), it is premature to make this sort of judgement. There have certainly been positive developments flowing from the Act, but so far it is an “incomplete success” and we are still years away from being able to make a realistic judgement.

The Telecommunications Act was not revolutionary: it simply codified the successful results of the many experiments undertaken by States in the preceding decade to slowly replace local monopolies with competition. TCG, which began offering competitive local telecommunications services in 1985, was heavily involved in these state-by-state experiments.

By 1995, it was clear that the state experiments promoting local exchange competition had been successful. Where states had authorized local competition and required the Incumbent Local Exchange Carrier (ILEC) monopolies to interconnect with CLECs, consumers were beginning to see the benefits of competitive choice. A few larger business users directly benefitted from the early competition because CLECs could serve them directly. But smaller business and residential consumers benefitted indirectly as the monopoly ILECs “woke up” and started to improve the overall quality, performance, and pricing of their services in response to the “pin prick” competition offered by the early CLECs.

In the months leading up to the passage of the Act, Congress correctly determined that three things would be needed to accelerate the development of local competition: 1) CLECs would need to raise billions of dollars from capital markets in order to build the competitive local networks; 2) legal and regulatory barriers to local competition would have to be eliminated; and, 3) the monopolist ILECs' hostility toward competition would need to be neutralized, at least for as long as competitors have no choice but to rely on the ILECs' for essential facilities. It is appropriate, therefore, to judge the "success" or "failure" of the Telecommunications Act on its second anniversary by how well it has achieved each of these essential prerequisites.

#### **Success on Wall Street . . .**

It is clear that the Telecommunications Act has been spectacularly successful in encouraging investment in the CLEC industry. By replacing a patchwork of 50 state policies on local competition with a single clear national policy, the Act lowered the perceived risk and increased the perceived potential reward of investing in the fledgling Competitive Local Exchange Carriers (CLECs). This improved investor confidence made it possible for the CLECs to begin raising the billions of dollars that will be needed every year to steadily deploy the competitive networks that competitors must have to compete.

#### **Barriers on Main Street . . .**

It is premature to judge, however, whether the other objectives of the Act have been achieved. The 1996 Telecommunications Act, on its face, removed state and municipal legal and regulatory barriers to open telecommunications markets to competition. Since many state legislatures and public utility

commissions were embracing local competition even before the Act became law and other states have moved rapidly to conform to the national law in the past two years, it is fair to say that few state-imposed barriers to entry exist today.

However, it is not at all clear that the Act has done anything yet to eliminate the very substantial barriers to local competition erected by municipal governments. The most unfortunate of these local barriers is the practice of many municipalities to discriminate heavily against competitive local carriers when it comes to CLECs' access to and payments for use of public rights-of-way. A CLEC will be reluctant to deploy facilities to serve consumers in a municipality if the municipal government demands a substantial share of the CLEC's revenues -- essentially a tax -- but demands nothing similar from the ILEC. Although Sec. 253 of the Act bars such anti-competitive discrimination by municipalities<sup>1</sup>, a final resolution will come only after expensive and time-consuming court battles. Until then, these municipal barriers will remain in place, denying the benefits of competition to many consumers, possibly for many years to come.

### **... and Entangling Monopolies Everywhere**

But the greatest barrier to local exchange competition is the anti-competitive attitude and behavior of the ILECs. Taking advantage of their monopoly position, the ILECs have not hesitated to employ any tactic that would frustrate, delay, or otherwise impose substantial "costs of entanglement" on would-be competitors seeking to interconnect with the ILECs' networks and to utilize ILEC facilities as part of CLEC service. This "strategy of

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<sup>1</sup> See TCG White Paper *Clearing the Road: The 1996 Telecommunications Act and Carrier Access to the Public Rights-of-Way*, July 1997

entanglement” has been perfected and shamelessly used by the ILECs to discourage competition since the passage of the 1996 Telecommunications Act. **It is a particularly pernicious barrier to competition during the period when CLECs have no practical choice but to use the ILECs’ services and facilities as essential elements of the CLECs’ services.**

Even though the Act guarantees that monopolies will be justly compensated for the use of their facilities by competitors and even though, in the case of the Bell companies, they get a coveted *quid pro quo* for opening up the local exchange bottleneck, **monopolies will never want to make it easy or efficient for competitors to use their networks.** And one federal statute is not going to make a monopoly politely give up its monopoly power and its ability to frustrate a competitor’s ability to compete.

So, if ILECs won’t treat rival CLECs fairly or equally, what are the alternatives? At this stage, there are only two options for the CLEC. The “first-best” alternative is for the CLEC to reduce its reliance on the incumbent’s facilities by deploying its own facilities to serve the customer wherever it is possible and economic to do so. TCG has always said such facilities-based local competition is the only real form of competition.

Unfortunately, “instant install” alternative local telecommunications facilities do not exist. It takes substantial capital, time, and manpower to build competitive facilities. Even under the best of circumstances, it will take many years for local competitors to deploy their own ubiquitous facilities. It will take even longer if, as noted earlier, municipalities continue to maintain barriers that discourage competitive network deployment.

The “second-best” alternative is for the competitor to trust the ILEC enough

to put its brand name, its profitability, and its ultimate destiny in the ILEC's hands by utilizing the ILEC's facilities.<sup>2</sup> Unfortunately, the ILECs have yet to earn that trust, and have instead pursued their entanglement strategy with a vengeance: refusing to implement signed and approved interconnection agreements, contesting the terms of the agreements, and refusing to provide service that is "at least equal" in quality to the service the ILECs provide themselves.<sup>3</sup>

Local competition would develop much more quickly if the ILECs themselves reformed their attitude and performance and abandoned their litigious ways so that CLECs would be more willing to risk relying on a competitor's facilities. If the ILECs are unwilling to reform themselves, however, it is up to state and Federal regulators to reduce the risk and cost of entanglement through swift, strong, and consistent application of the "carrots and sticks" embodied in the Telecommunications Act.

So, as we celebrate the second anniversary of the Telecommunications Act, we need to take a hard businesslike look at what the real possibilities are. Let's get real.

### **The Evolution of the CLEC**

The goal of the Act is to provide a competitive choice of telecommunications service providers -- particularly for local exchange services -- for everyone. To compete successfully with the ILEC, the competitive provider itself must have economies of scale and scope and, most importantly, the incumbent

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<sup>2</sup> A third option provided for in the Act, simple rebranding of the ILEC's retail service (total service resale -- "TSR"), has proved to be impractical in almost every instance.

<sup>3</sup> See 47 U.S.C. §251(c)(2)(c) and 47 U.S.C. §251(c)(3).

monopolist cannot be allowed to ruin the competitor's business through entanglement.

To achieve the economies of scale and scope that will allow it to compete with the ILEC in all markets, the facilities-based CLEC must evolve through four distinct phases. Each phase takes time and substantial CLEC resources. In addition, each phase exposes the CLEC to ever-increasing risks of entanglement with the ILEC.

In the first phase, a facilities-based CLEC must establish its own broadband backbone local network -- its service area footprint-- and garner large business customers and long distance carriers to act as "anchor tenants" for this initial private line services network. These large customers help pay for the CLEC's basic local infrastructure. But this also where the facilities-based CLEC starts to become entangled with the ILEC. To serve some large customers, the CLEC must "collocate" its broadband network at an ILEC's central office and lease a broadband "loop" from the ILEC. Fortunately, for such large customers the CLEC can afford to "brute force" through the difficulties and inefficiencies imposed by the necessary -- and usually temporary -- entanglement with ILEC.

In the second stage, the CLEC starts filling its near-limitless optical fiber and broadband wireless capacity by increasing its range of services -- adding switches for local exchange services and Internet services, for example -- and by selling services to medium sized businesses. But at this stage of development the degree of entanglement with the ILEC -- and the cost of the entanglement -- increases dramatically. Now local telephone calls must be exchanged seamlessly between the ILEC and CLEC switches, 911 calls must be handled flawlessly, and it may be necessary for the CLEC to lease

hundreds of analog loops rather than a few broadband loops because of the location of the smaller customers and their volume characteristics. At this stage, the cost of entanglement starts to become a major factor in the CLEC's business and marketing strategies.

In the third phase, the CLEC has developed sufficient economy of scale and scope on its own network that it can begin to offer services on an incremental cost basis to new groups of customers, such as small business and even residential consumers in apartment buildings and similar high density locations. At this stage, if the CLEC is not careful, the cost of entanglement can be overwhelming. It is these costs of entanglement with the ILECs, rather than the cost of the CLEC's own network operations or any other single factor, that ultimately determine whether a CLEC can serve a particular geographic area or type of customer.

Only after achieving strong financial performance during these first three stages of development will a facilities-based CLEC be in a position to take on the biggest and most costly challenge of the fourth phase -- bringing choice and competitive alternatives to the mass markets. Now more than ever before, the costs of entanglement with the ILEC will determine whether and when a CLEC will be able to take on the "mass market" opportunity, which -- but for the cost of entanglement -- could be a very attractive business.

The duration of the first three phases and the success of the CLEC in the fourth phase depends, ultimately, on the degree of ILEC entanglement and the ability of the CLEC and regulators to minimize entanglement costs. Thus, "complaints" that CLECs seem to be unwilling to serve certain markets reflect the success of the ILECs' efforts to protect those markets by imposing

preemptive entanglement costs on CLECs, not a lack of CLEC intentions or efforts.

### **Minimizing Entanglement: Making the Act Work**

TCG has been entangled with the ILECs for more than 10 years and this experience has convinced us that we can be most successful by minimizing our reliance on hostile competitors. However, given the harsh reality that we must interconnect with the ILEC to exchange traffic and to utilize some of their facilities at least temporarily, we had hoped that the Act would have made it possible for TCG to minimize our entanglement costs. That part of the Act that encouraged carrier-to-carrier business deals to exchange traffic and to lease ILEC unbundled elements was indeed very promising.<sup>4</sup>

Unfortunately, most ILECs refused to enter into reasonable, non-entangling business deals. And even those who did negotiate seemingly reasonable interconnection arrangements have fallen short on the implementation.<sup>5</sup> ILECs -- particularly the Regional Bell Operating Companies (RBOCs) -- continue to protect their monopoly control of the mass market by making entanglement so awkward and costly that it is economically and operationally difficult -- if not impossible -- for any competitor to utilize unbundled ILEC facilities to address the broad local market in the near term. For example, the "cash" costs of collocating at ILEC central offices and of using an ILEC loop to reach a small customer are high enough; but the added, hidden entanglement costs make it impractical to use these unbundled elements except for larger business users.

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<sup>4</sup> See 47 U.S.C. §§251, 252.

<sup>5</sup> See TCG White Paper *Arbitration Results: The Runs, The Hits, The Errors*, November 1996.

One way out of this quagmire for a CLEC is to establish seamless interconnection with the ILEC's Operations Support System (OSS). Electronic interfaces between CLEC and ILEC OSS will reduce the ILEC's ability to corrupt a competitor's service, reduce the overall cost of entanglement, and ultimately make it possible to bring a competitive choice to the mass markets.

OSS interconnection must cover five functions: 1) Pre Ordering, 2) Ordering, 3) Installation, 4) Maintenance and Repair, and 5) Billing.<sup>6</sup> So far, only the Ordering processes of OSS have received **any** attention by the ILECs and this has been limited to the ordering functions associated with the so-called "Total Service Resale" (TSR) of the ILECs' basic service. Unfortunately, "Ordering for TSR" is the simplest part of OSS interconnection and the least useful in terms of promoting facilities-based local exchange competition.

**There has been little or no progress on streamlining and improving the OSS processes for any of the five OSS functions needed for efficient facilities-based competition.** Efficient, effective OSS interconnection would substantially reduce entanglement costs and make it possible for CLECs to address the mass markets efficiently and economically. If the ILECs will not improve OSS interconnection for real facilities-based competitors, regulators must take this failure into account in considering -- and rejecting -- RBOC petitions for entry into InterLATA services and other premature ILEC petitions for "deregulation."

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<sup>6</sup> See In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket 96-98, August 8, 1996, at ¶523.

Above all, ILECs are unwilling (or are simply unable) to meet the “Performance Parity Principle” embodied in Sec. 251 of the Act.<sup>7</sup> This principle requires ILECs to provide interconnection, facilities, and services to competitors that are **at least equal** in quality and performance to what the ILECs provide to themselves, to their affiliates, or to their own customers. Because the Performance Parity Principle can be a powerful tool for minimizing the cost of entanglement, it is arguably the single most important pro-competition provision in the Act. If ILECs don’t provide Performance Parity, rivals will always be hostage to the ILECs’ entangling inefficiency and poor quality of service, and hostages make poor competitors.

This then is the pivotal role for regulators if policy makers expect competitive choice to come to the mass market anytime soon: **Performance Parity must be enforced vigorously and swiftly.** ILEC violators must face swiftly applied and substantial penalties for failing to satisfy the Performance Parity requirement of the Act.<sup>8</sup> Without “swift justice,” the CLECs will naturally be reluctant to rely heavily on unrestrained ILECs.

### **The Future**

The speed with which mass market competition develops depends entirely on the viability of each of the options facing the CLECs. If the ILECs behave (on their own or because of regulatory/judicial intervention) and no longer pursue their strategy of entanglement, the CLECs will eventually gain the confidence to rely on the ILECs and will therefore be able to bring real competitive choice to the mass market relatively quickly. On the other hand,

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<sup>7</sup> See TCG White Papers *The Performance Parity Principle*, July 1997 and *Model Performance Parity Measures for Facilities-Based Competition*, November 1997.

<sup>8</sup> See *Model Regulatory Procedures for the Enforcement of Interconnection Agreements*, November 1997.

if the ILECs continue to pursue the entanglement strategy, mass market competition will have to wait for the CLECs to build their own independent networks.

One thing is clear: no CLEC can allow hostile competitors to dictate its future. TCG will continue to make every effort to make the ILECs live up to their obligations under the 1996 Act so that consumers can have real choices sooner. Because TCG has no illusions that we will ever be able to entrust our destiny to the ILECs -- and unless real world experience convinces us otherwise -- we will continue to rely on ourselves as much as possible and to deploy our own facilities as economically and as quickly as we can.

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## **Other TCG White Papers:**

*(Titles cited in the text are in boldface.)*

- **Model Regulatory Procedures for the Enforcement of Interconnection Agreements** (November 1997)
- **Model Performance Parity Measures for Facilities-Based Competition** (November 1997)
- **The Performance Parity Principle** (July 1997)
- **Clearing the Road: *The 1996 Telecommunications Act and Carrier Access to the Public Rights-of-Way*** (July 1997)
- **Universal Service Assurance: *Act Three of a Four Act Play*** (April 1997)
- **Beyond Cost Models: *Managing Interconnection Pricing to Achieve Sustainable Competition*** (February 1997)
- **The Number Crunch: *A TCG Solution - Revisited*** (January 1997)
- **Arbitration Results: *The Runs, The Hits, and The Errors*** (November 1996)
- **Arbitration: *The End Game*** (June 1996)
- **The Number Crunch: *A TCG Solution*** (May 1996)
- **Performance Standards: *Key To Interconnection*** (April 1996)
- **Effect of Resale on Facilities-Based Competition in the Local Exchange Market** (November 1995)
- **Interconnection Compensation - The Critical Issue for Local Exchange Competition** (October 1995)
- **States at the Forefront in Making Local Telecommunications Competition Legal** (August 1995)
- **The Economics of Interconnection (By Gerald Brock)** (April 1995)
- **Universal Service Assurance II: *A Blueprint for Action*** (November 1994)
- **CompLECS & Universal Service Assurance: *How Competition Will Strengthen Universal Telephone Service*** (August 1994)
- **Whither the CAPs?** (June 1994)
- **The Unlevel Playing Field: *Asymmetric Market Power Demands Asymmetric Regulation*** (March 1994)
- **Universal Service Assurance: *A Concept for Fair Contribution and Equal Access to the Subsidies*** (December 1993)
- **The "Pot Bay": *Phase II, Ameritech Takes a Step in the Right Direction***(November 1993)
- **Telco Fiber Fiascos: *Will Accelerated Infrastructure Programs Be the Next Nuclear Power Plant Debacles?*** (July 1993)
- **The "Pot Bay": *Several BOCs Attempt to Obstruct Interconnection...Again*** (June 1993)

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# **THE PERFORMANCE PARITY PRINCIPLE**

*July 1997*

**TCG**

**Teleport Communications Group**

## *The Performance Parity Principle*

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### **THE ACT DEFINES PERFORMANCE PARITY**

The single most important principle that assures the national goal of competitive local telecommunications markets is found in Section 251(c)(2) of the Telecommunications Act of 1934 as amended: *the principle of performance parity*. Section 251(c)(2)(C) imposes upon incumbent local exchange carriers (ILECs),

**“The duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier’s network...that is at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection.”**

The Act also invokes the performance parity principle with respect to the common “platform” facilities that ILECs must provide to their competitors. Section 251(c)(3) additionally imposes on ILECs,

**“The duty to provide, to any requesting telecommunications carrier for the provision of telecommunications service, nondiscriminatory access to network elements on an unbundled basis... .”**

*Since facilities-based competition is the only form of competition that assures consumers a physical alternative to the ILEC, interconnection which satisfies the performance parity principle is the key to real consumer choice.*

The performance parity principle reflects the fact that ILECs have little if any incentive to treat rival interconnecting telecommunications service providers in a fair or nondiscriminatory fashion, but that they must do so if competition is to yield seamless interoperability in a “network of networks.” The performance parity principle recognizes that incumbent local exchange carriers, who still serve nearly 100 percent of the consumers in the United States, can degrade the service quality of their new rivals or raise the rivals’ cost of interconnection. The performance parity principle recognizes, too, that if the ILECs are allowed to treat interconnecting carriers as second-class citizens, facilities-based competition will be retarded. Since

facilities-based competition is the only form of competition that assures consumers a physical alternative to the ILEC, interconnection which satisfies the performance parity principle is the key to real consumer choice.

Because even facilities-based competitive local exchange carriers (CLECs) need to use some elements of the ILECs' networks in order to provide service, the performance parity principle applies also to ILECs' provision of unbundled network elements. The Federal Communications Commission's rules establish that "nondiscriminatory" access with respect to unbundled network elements means access that is, in fact, "at least equal".<sup>1</sup> Again, the Act and the rule recognize the plain fact that the ILEC can materially affect the service quality experienced by the CLEC's customers, if the rival needs any ILEC facilities to provide service. If the ILEC fails to promptly provision an unbundled loop, for example, it is the CLEC's reputation, not the ILEC's reputation, that will be harmed. The performance parity principle in effect establishes a statutory requirement for performance benchmarks that "operationalize" the concept of performance parity.<sup>2</sup> The Act created a remarkably efficient regulatory tool in this regard, for the requirement is clear, the determination of whether or not it has been met is "binary", and enforcement of the requirement will preclude exhausting and drawn out complaint procedures.

***"Nondiscriminatory"  
access with respect to  
unbundled network  
elements means access  
that is, in fact, "at  
least equal".***

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<sup>1</sup> 47 C.F.R. § 51.311 (b).

<sup>2</sup> The Department of Justice, in its evaluation of SBC's application for interLATA authority in Oklahoma, adopted the phrases "performance benchmarks" to indicate what must be evaluated to determine whether a BOC had met its obligations and "performance measures" to describe how the evaluation is accomplished. *Evaluation of the Department of Justice, In re Application by SBC Communications Inc., Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In Region, InterLATA Service in Oklahoma*, CC Docket No. 97-121 (May 16, 1997). TCG adopts the language of the DoJ except when referring to existing documents such as interconnection agreements. TCG fully endorses the DoJ approach.

**STATUTORY  
REQUIREMENTS  
VS.  
CONTRACT  
REQUIREMENTS**

It is important to distinguish, however, between the statutory requirement and the concrete performance standards set forth in many interconnection agreements between CLECs and ILECs. The latter are contractual obligations and the penalty for failure to meet them is normal contract damages, either as specified in the contract or established by a court or the state regulatory agency. Failure to meet the performance parity requirement of the Act, on the other hand, could result in a host of negative outcomes for the ILEC, ranging from fines to lawsuits.<sup>3</sup>

***Failure to provide  
performance parity  
must result in denial  
of BOC interLATA  
authority.***

For a Bell operating company (BOC), failure to provide performance parity must result in denial of authority to enter the interLATA market. Specifically, in connection with the evaluation of a BOC's application to enter the long distance business, both the regulatory agency in the relevant state and the FCC must find that the BOC has provided interconnection and unbundled elements in accordance with Section 251(c)(2) and (c)(3).<sup>4</sup> The performance parity principle applies to every item in the 14-point "competitive checklist" the BOCs must satisfy before they can enter the long distance market.<sup>5</sup> But all ILECs, not just BOCs, always will be accountable for **performance parity** under Section 251 of the Act. Thus **all** ILECs must be in a position to show that they have provided service or functionalities to CLECs on par with the equivalent service or functionalities that they provide to themselves.

**"YES" OR "NO" PARITY** The ILEC's showing must result in a "yes" or "no" answer. The ILEC has either met its statutory obligations or it has not. The Act does not allow for "almost" met or "conditionally" met. To get the right answer, CLECs and regulators must be able to

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<sup>3</sup> For example, Iowa has fined US West for failing to implement its interconnection agreements and ELI has filed an antitrust suit against US West.

<sup>4</sup> 47 U.S.C. §271(c)(2)(B)(i) and (ii).

<sup>5</sup> Sections 271(c)(2)(B)(i) and 271(c)(2)(B)(ii) incorporate the performance parity requirements embodied in sections 251(c)(2) and 251(c)(3).

see quantitative data, or **performance measures**. A comparison of data sets, one reflecting the ILEC's performance for itself, and others reflecting the ILEC's performance for each other entity with which it interconnects, will quickly reveal whether the performance parity principle has been satisfied.<sup>6</sup> A simple bar graph will often suffice. Regulators can scan the results and literally "check off" the conclusion: "yes" the ILEC has provided "at least equal" service to the CLEC, or "no", it has not. The proper reporting requirements will make regulatory oversight simple and allow "swift justice" if the ILEC has failed to meet the requirement.<sup>7</sup>

*Statistical validity  
must be assured.*

Since the data sets will represent very different quantities for the ILEC and each CLEC, statistical validity must be assured. While not proposing particular statistical tests here, we will emphasize a few key principles. First, reports must be made monthly, and analysis must cover a significant period of time -- not just one month -- to ensure that the results reflect the ILEC's systemic performance, not a fluke or a temporary "brute forced" result. In the monthly reporting of performance, the ILECs should report both current monthly results and a three-month moving average of performance. For each benchmark being measured, for each carrier or customer, a comparison of the mean level of achievement for each entity can be made. The mean performance and the standard deviation from the mean should be reported to permit analysis of the variance between levels of achievement for different groups. Variances must be analyzed, because a CLEC does not receive service that is "at least equal" if the statistic reported for ILEC service to the CLEC varies more from the mean than the statistic reported by the ILEC for service to its own retail customers.

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<sup>6</sup> At a minimum, reports should cover: the ILEC's service to itself, its affiliates, the four largest interexchange carriers (IXCs), its ten largest commercial clients, and each CLEC with which it interconnects.

<sup>7</sup> A process must be established to allow CLECs to place a bona fide request for performance measurements -- allowing CLECs to police ILECs.

***Parity is a moving benchmark.***

The statutory language and the Commission's interpretation indicate that parity is a moving benchmark that the Commission cannot and should not attempt to pinpoint. Benchmarks will change over time based on two factors: evolving technology and improvements in response to competitive pressures. Rigid measurement requirements would be contrary to the statute, because they would freeze in place ILEC practices and would require CLECs repeatedly to request rule changes merely to ensure enforcement of the statutory performance parity principle.<sup>8</sup>

An illustrative list of performance benchmarks is appended to this paper.<sup>9</sup> But the burden of developing the appropriate quantitative measures assuring “apples-to-apples” comparison rests with the ILEC. The ILEC must not be permitted to escape its statutory duty based on its assertion that it does not perform a particular function for itself at all, and therefore no comparative performance measure is available. Rather, for these limited cases (if any), the ILEC must create internal performance benchmarks that approximate the benchmarks for the function the CLEC needs, and permits a direct “apples to apples” comparison. If it cannot do so, it is in violation of the Act.

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<sup>8</sup> The idea of parity as a moving benchmark is precisely the concept endorsed by the Department of Justice (“DoJ”) and explained in the accompanying affidavit sponsored by Michael J. Friduss concerning the DoJ evaluation of the SBC-Oklahoma Section 271 application.

<sup>9</sup> This illustrative list is not definitive nor all-inclusive. Rather, it is a beginning point from which further performance benchmarks should be developed, refined, and then continually updated.